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United States Patent [19]

Allington et al.

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[54] **METHOD OF TERMINATING ROASTING OF BULK MATERIALS IN REAL TIME ON BASIS OF OBJECTIVELY DETERMINED COLOR OF MATERIALS**

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[*] Notice: This patent issued on a continued prosecution application filed under 37 CFR 1.53(d), and is subject to the twenty year patent term provisions of 35 U.S.C. 154(a)(2).

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Related U.S. Application Data

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[51] **Int. Cl.⁷** **A23F 5/00**

[52] **U.S. Cl.** **426/233; 426/466; 426/467**

[58] **Field of Search** 426/233, 231, 426/466, 467, 520; 99/331, 342, 476, 483

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[57] ABSTRACT

Bulk material formed by a multiplicity of individual moving particles is heat-treated by directing a light beam into an observation volume of the material and generating light reflections off at least one particle in the observation volume. A characteristic of the light reflections which is indicative of a desired extent to which the material is to be heat-treated is identified and the material is subjected to a heated environment and thereby heat-treated. The light reflections are monitored for the characteristic, and subjecting the material to the heated environment is ended in response to detecting the characteristic of the light reflections.

8 Claims, 3 Drawing Sheets